Project Baseline Summary Report

Data Source: **EM CDB**
Report Number: **GEN-01b**
Operations/Field Office: **Savannah River**
Print Date: **3/9/2000**
Site Summary Level: **Savannah River Site**
HQ ID: **0503**
Project **SR-FA06 / 235-F Deactivation Project**

General Project Information

Project Description Narratives

Purpose, Scope, and Technical Approach:

Definition of Scope: Detailed deactivation plans for the 235-F facility do not currently exist; deactivation planning is currently scheduled go begin in FY02 and is included in this PBS. Execution of a phased deactivation program is to begin in FY04 and is scheduled to end in FY11.

Upon completion of the Nuclear Material Stabilization Program, these facilities are envisioned to be surplus highly contaminated [hazard class 2] nuclear facilities. The primary objective of the multi-year deactivation program is to reduce the risks associated with these nuclear facilities and lower long-term surveillance and maintenance (S&M) costs per DOE Order 430.1A and the Implementation Guides. The goal for deactivation of the surplus facilities is to achieve a passive state for long term S&M; facilities will be accessed controlled with periodic entry for inspection and monitoring. The periodic maintenance of the building structures and key safety systems (ventilation/monitoring) are expected to be the only routine activities required. It is anticipated that the facility will be maintained in this condition will for up to a 30-year period while awaiting final decisions on facility disposition.

The deactivation program would include the following key elements: 1. Clean systems and specialized equipment to minimize holdup. 2. Complete radiological surveys, chemical inventories, and identify other hazardous conditions. 3. De-inventory the facility of all chemical and other hazardous materials. 4. De-energize and isolate all non-essential building and process systems. 5. Institute a facilities support standby program to ensure basic services are maintained. 6. Complete facility isolation and initiate S&M program utilizing revised safety documentation to protect worker safety and health as well as the environment.

Technical Approach: Efficiencies and Lessons Learned from previous and current deactivation projects across the DOE Complex will be incorporated into deactivation plans. The project will be managed per the DOE-EM 60 Deactivation Guidance; phase 1 Project Requirements Determination, Phase 2 Project Execution Plan Development and Phase 3 Project Execution. The characterization of existing surplus facilities and development of end state criteria is a critical to the success of the deactivation project. Application of latest technology developments in the characterization and analysis of residual radiological and industrial hazards and cost-benefit engineering evaluations are key components in developing a cost effective deactivation plan and will be developed as funding is available prior to completion of nuclear material stabilization phase for each facility.

Project Status in FY 2006:

The 235-F facility vaults will be required until completing the transfer of inventories to the Actinide Packaging and Storage Facility, which is currently under construction. For this reason, the 235-F facility will initiate a phased deactivation program beginning in FY04; completion of the deactivation program for 235-F facility is scheduled for FY11. Stabilization activities will be conducted utilizing the current operating staff, supplemented by a core group of deactivation experts. This will ensure institutional knowledge is retained and utilized through completion of the deactivation project.

Post-2006 Project Scope:

The phased deactivation of the 235-F facility continues through FY11; completion of the 235-F facility deactivation is dependent upon no additional missions being identified for the facility and completion of APSF. Upon completion of the 235-F deactivation project, routine surveillances will be

Project Description Narratives

established to verify the structural integrity and operability of equipment required managing residual risks as defined in the surveillance and maintenance plan. This routine monitoring will continue until the final disposition of the facilities. The S&M monitoring scope and costs are captured in the F Area Long Term Monitoring PBS (SR-FA-16)

Project End State

This project provides for the deactivation of 235-F facility only. Additional projects will be required to complete future decommissioning and /or meet the EM site end-state; the 235-F facility end states have not been defined. No plans have been made at this time to reuse 235-F facility after deactivation.

No nuclear materials, spent fuel, or high level waste are planned for storage in 235-F facility. TRU and low level solid and liquid waste will be generated during deactivation activities. These wastes will be disposed via other solid waste treatment facilities at SRS. Life cycle waste costs are reflected in the operating costs of those facilities.

Cost Baseline Comments:

Costs identified in this PBS are rough order of magnitude engineering estimates based upon the lessons learned from the Hanford PUREX Deactivation project. Work scope identified in this PBS is based on process and facility history only, not from detailed characterization of facility hazards. Such characterization efforts will be used to refine the scope and cost, as additional project definition becomes available.

This estimate should be used for pre-conceptual planning, and should be considered as preliminary funding guidance only. Detailed work scopes and cost estimates will be developed as part of the Deactivation Plan development and will be a product of that work when funded.

This project estimate includes only direct project deactivation activity costs. The facility baseline S&M costs must be added to the deactivation cost to obtain the overall life cycle costs.

Safety & Health Hazards:

The deactivation-planning project will be funded in FY02. To-date a deactivation specific safety and hazard analysis has not been performed. Such analyses will be performed in accordance with Site standards. The criteria for determining the radiological hazard categories are provided in DOE-STD-1027-92, and the criteria for determining the chemical hazard categorization are provided in WSRC-MS-92-206. Until modified by deactivation activities, the operational safety basis will be maintained as the controlling ASA.

Safety & Health Work Performance:

Activities and checkpoints are described by the Integrated Management System Description. The conditions and requirements are clearly established and agreed upon prior to the starting of any project and those requirements are contractually binding upon WSRC. The key elements of the WSRC Integrated Safety Program are to define the scope of work, identify and analyze hazards associated with the work, develop and implement hazard controls, perform work within controls, and provide feedback on adequacy of controls and continue to improve safety management. The WSRC Integrated Procedures Management System is the primary mechanism for implementing the objective, principles and functions of the Safety Management System. This system establishes Company-Level, Division-level, and Program-specific procedures consistent with organizational roles,

Project Baseline Summary Report

Project Description Narratives

and ensures a consistent, discipline site-wide approach to safety while performing work. A documented safety basis will be maintained through completion of the deactivation project.

PBS Comments:

The fundamental concept of deactivation is to reduce risks associated with surplus facilities, thereby reducing the S&M cost while maintaining safety for site employees, the public and the environment. The methodology is to use all technology available to de-inventory, stabilize residual hazardous materials to the lowest manageable hazard level possible, shutdown of unnecessary systems and reduction of discretionary S&M. Upon completion of deactivation, the facility would be locked with only periodic entry for inspection and monitoring, while awaiting a turnover to EM for a final decision on disposition (D&D, entombment, ...).

Baseline Validation Narrative:

Not Applicable.

General PBS Information

Project Validated? **Date Validated:**

Has Headquarters reviewed and approved project? No

Date Project was Added: 12/1/1997

Baseline Submission Date: 7/3/1999

FEDPLAN Project? Yes

Drivers:

CERCLA	RCRA	DNFSB	AEA	UMTRCA	State	DOE Orders	Other
Y	Y	Y	N	N	Y	Y	Y

Project Identification Information

DOE Project Manager: G. M. Nichols, Jr.

DOE Project Manager Phone Number: 803-952-2021

DOE Project Manager Fax Number: 803-952-2019

DOE Project Manager e-mail address: gnichols@srs.gov

Is this a High Visibility Project (Y/N):

Planning Section

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Baseline Costs (in thousands of dollars)

	1997-2006 Total	2007-2070 Total	1997-2070 Total	1997	Actual 1997	1998	Actual 1998	1999	2000	2001	2002	2003	2004	2005	2006
PBS Baseline (current year dollars)	34,600	54,900	89,500						0	0	1,000	1,000	3,600	12,000	17,000
PBS Baseline (constant 1999 dollars)	28,801	41,809	70,610						0	0	907	883	3,097	10,050	13,864
PBS EM Baseline (current year dollars)	34,600	54,900	89,500						0	0	1,000	1,000	3,600	12,000	17,000
PBS EM Baseline (constant 1999 dollars)	28,801	41,809	70,610						0	0	907	883	3,097	10,050	13,864

	2007	2008	2009	2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
PBS Baseline (current year dollars)	16,300	14,100	12,900	7,100	4,500	0	0	0	0	0	0	0	0	0	0	0
PBS Baseline (constant 1999 dollars)	12,943	10,902	9,712	5,205	3,047	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (current year dollars)	16,300	14,100	12,900	7,100	4,500	0	0	0	0	0	0	0	0	0	0	0
PBS EM Baseline (constant 1999 dollars)	12,943	10,902	9,712	5,205	3,047	0	0	0	0	0	0	0	0	0	0	0

Baseline Escalation Rates

1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
			3.60%	3.60%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

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2010	2011-2015	2016-2020	2021-2025	2026-2030	2031-2035	2036-2040	2041-2045	2046-2050	2051-2055	2056-2060	2061-2065	2066-2070
2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%	2.70%

Project Reconciliation

Project Completion Date Changes:

Previously Projected End Date of Project: 9/1/2013

Current Projected End Date of Project: 9/1/2011

Explanation of Project Completion Date Difference (if applicable):

Project Cost Estimates (in thousands of dollars)

Previously Estimated Lifecycle Cost (1997 - 2070, 1998 Dollars):	64,645	**Actual 1997 Cost:**	**Actual 1998 Cost:**
Previously Estimated Lifecycle Cost of Project (1999 - 2070, 1998 Dollars):	64,645	**Inflation Adjustment (2.7% to convert 1998 to 1999 dollars):**	1,745
Previously Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	66,390		

Project Cost Changes

	Cost Adjustments	Reconciliation Narratives
Cost Change Due to Scope Deletions (-):		
Cost Reductions Due to Efficiencies (-):		
Cost Associated with New Scope (+):		
Cost Growth Associated with Scope Previously Reported (+):	4,222	Estimate revised.
Cost Reductions Due to Science & Technology Efficiencies (-):		
Subtotal:	70,612	
Additional Amount to Reconcile (+):	-2	
Current Estimated Lifecycle Cost (1999 - 2070, 1999 Dollars):	**70,610**	

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Project **SR-FA06 / 235-F Deactivation Project**

Milestones

Milestone/Activity	Field Milestone Code	Original Date	Baseline Date	Legal Date	Forecast Date	Actual Date	EA	DNFSB	Mgmt. Commit.	Key Decision	Intersite
Project Mission Complete	SR-FA06-003		9/1/2011								
Project Start	SR-FA06-001		10/1/2002								

Milestones - Part II

Milestone/Activity	Field Milestone Code	Critical Decision	Critial Closure Path	Project Start	Project End	Mission Complete	Tech Risk	Work Scope Risk	Intersite Risk	Cancelled	Milestone Description
Project Mission Complete	SR-FA06-003				Y						
Project Start	SR-FA06-001			Y							

Performance Measure Metrics

Category/Subcategory	Units	1997-2006 Total	2007-2070 Total	1997-2070 Total	Actual Pre-1997	Planned 1997	Actual 1997	Planned 1998	Planned 1999	Planned 2000	Planned 2001	Planned 2002	Planned 2003	Planne 200
Fac.														
Deact. During Per.	NF	0.00	1.00	1.00										
Tech.														
Deployed	Ntd	14.00	0.00	14.00										14.(

Category/Subcategory	Units	Planned 2004	Planned 2005	Planned 2006	Planned 2007	Planned 2008	Planned 2009	Planned 2010	Planned 2011 - 2015	Planned 2016 - 2020	Planned 2021 - 2025	Planned 2026 - 2030	Planned 2031 - 2035
Fac.													
Deact. During Per.	NF								1.00				
Tech.													
Deployed	Ntd	14.00											

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Category/Subcategory	Units	Planned 2036 - 2040	Planned 2041 - 2045	Planned 2046 - 2050	Planned 2051 - 2055	Planned 2056 - 2060	Planned 2061 - 2035	Planned 2066 - 2070	Exceptions	Lifecycle Total
Fac.										
Deact. During Per.	NF									1.00
Tech.										
Deployed	Ntd									14.00

Technology Needs

Site Need Code: SR99-4001

Site Need Name: Dismantlement of Large and/or Complex Equipment and Structures

Focus Area Work Package ID: DD-10

Focus Area Work Package: Production Reactor D&D

Focus Area: DDFA

Agree with Technology Link: Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Laser Cutting and Size Reduction		
Laser Cutting and Size Reduction		
Laser Cutting and Size Reduction		
Dual Arm Work Platform Teleoperated Robotics System		
Dual Arm Work Platform Teleoperated Robotics System		
Dual Arm Work Platform Teleoperated Robotics System		
Mobile Robot Worksystem (ROSIE)		
Mobile Robot Worksystem (ROSIE)		
Mobile Robot Worksystem (ROSIE)		
High Speed Clamshell Pipe Cutter		
High Speed Clamshell Pipe Cutter		

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Technology Needs

High Speed Clamshell Pipe Cutter
Swing-Reduced Crane Control
Swing-Reduced Crane Control
Swing-Reduced Crane Control
Oxy-Gasoline Torch
Oxy-Gasoline Torch
Oxy-Gasoline Torch
Self Contained Pipe Cutting Shear
Self Contained Pipe Cutting Shear
Self Contained Pipe Cutting Shear
Remote Control Concrete Demolition System
Remote Control Concrete Demolition System
Remote Control Concrete Demolition System
Concrete Spaller
Concrete Spaller
Concrete Spaller
Track Mounted Shear/Crusher
Track Mounted Shear/Crusher
Track Mounted Shear/Crusher

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Technology Needs

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	00576: TAN - TRU Waste Segregated and Repackaged for WIPP Disposal	Y	N
	00522: LAC - Low Activity Bulk Waste	Y	N
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N
	00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal	Y	N
	00531: LAG - Contaminated Large Equip for Survey/Decon	Y	N
	00530: LAF - Bulk Metal for Survey/Decon	Y	N

Site Need Code: SR99-4002

Site Need Name: Characterization of Contaminated Surfaces

Focus Area Work Package ID: DD-03

Focus Area Work Package: Canyon Disposition Initiative

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Rapid Surface Sampling and Archive Record (RSSAR) System		
Rapid Surface Sampling and Archive Record (RSSAR) System		
Rapid Surface Sampling and Archive Record (RSSAR) System		
Rapid Surface Sampling and Archive Record (RSSAR) System		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray Fluorescence Spectrometer		
Portable X-Ray Fluorescence Spectrometer		

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Technology Needs

Portable X-Ray Fluorescence Spectrometer
Portable X-Ray Fluorescence Spectrometer
Gamma Ray Imaging System
Gamma Ray Imaging System
Gamma Ray Imaging System
Gamma Ray Imaging System
Mobile Automated Characterization System
Mobile Automated Characterization System
Mobile Automated Characterization System
Mobile Automated Characterization System
Gamma Cam (TM) Radiation Imaging System
Gamma Cam (TM) Radiation Imaging System
Gamma Cam (TM) Radiation Imaging System
Gamma Cam (TM) Radiation Imaging System
Field Transportable Beta Spectrometer
Field Transportable Beta Spectrometer
Field Transportable Beta Spectrometer
Field Transportable Beta Spectrometer
Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)
Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)
Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)
Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)
Indoor Radiation Mapping Using Laser Assisted Ranging and Data System
Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

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Technology Needs

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Ground Based Laser Induced Fluorescence Imaging

Ground Based Laser Induced Fluorescence Imaging

Ground Based Laser Induced Fluorescence Imaging

Ground Based Laser Induced Fluorescence Imaging

In Situ Object Counting System

In Situ Object Counting System

In Situ Object Counting System

In Situ Object Counting System

Site Need Code: SR99-4003

Site Need Name: Material Recycle (Process Equipment, Metal, Steel, and Concrete)

Focus Area Work Package ID: DD-05 **Focus Area Work Package:** Material Recycle and Release

Focus Area: DDFA **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Stainless Steel Beneficial Reuse		
Stainless Steel Beneficial Reuse		
Stainless Steel Beneficial Reuse		
Stainless Steel Beneficial Reuse		
Laser Decontamination and Recycle of Metals		
Laser Decontamination and Recycle of Metals		
Laser Decontamination and Recycle of Metals		

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Technology Needs

Laser Decontamination and Recycle of Metals
Biodegradation of Concrete
Biodegradation of Concrete
Biodegradation of Concrete
Biodegradation of Concrete
Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT
Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT
Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT
Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT
SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal
SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal
SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal
SEG Recycle and Reuse of Radioactively Contaminated Scrap Metal
Steam Vacuum Cleaning
Steam Vacuum Cleaning
Steam Vacuum Cleaning
Steam Vacuum Cleaning
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Soft Media Blast Cleaning
Soft Media Blast Cleaning
Soft Media Blast Cleaning

Technology Needs

Soft Media Blast Cleaning

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	00522: LAC - Low Activity Bulk Waste	Y	N
	02184: AA - LLW Soil, Rubble, Debris	Y	N
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N
	00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal	Y	N

Site Need Code: SR99-4004

Site Need Name: Decontamination of Contaminated Concrete

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Laser Surface Cleaning		
Laser Surface Cleaning		
Laser Surface Cleaning		
Laser Surface Cleaning		
Laser Surface Cleaning		
Biodegradation of Concrete		
Biodegradation of Concrete		
Biodegradation of Concrete		
Biodegradation of Concrete		
Biodegradation of Concrete		
2-D Linear Motion System		

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Technology Needs

2-D Linear Motion System
2-D Linear Motion System
2-D Linear Motion System
2-D Linear Motion System
Rotary Peening with Captive Shot
Rotary Peening with Captive Shot
Rotary Peening with Captive Shot
Rotary Peening with Captive Shot
Rotary Peening with Captive Shot
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Centrifugal Shot Blast System
Soft Media Blast Cleaning
Soft Media Blast Cleaning
Soft Media Blast Cleaning
Soft Media Blast Cleaning
Soft Media Blast Cleaning
ROTO PEEN Scaler and VAC PAC System
ROTO PEEN Scaler and VAC PAC System
ROTO PEEN Scaler and VAC PAC System
ROTO PEEN Scaler and VAC PAC System
ROTO PEEN Scaler and VAC PAC System

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Technology Needs

Concrete Shaver
Concrete Shaver
Concrete Shaver
Concrete Shaver
Concrete Shaver
Remotely Operated Scabbling
Remotely Operated Scabbling
Remotely Operated Scabbling
Remotely Operated Scabbling
Remotely Operated Scabbling
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Grinder
Concrete Spaller
Concrete Spaller
Concrete Spaller
Concrete Spaller
Concrete Spaller

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	00522: LAC - Low Activity Bulk Waste	Y	N
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N

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Technology Needs

Site Need Code: SR99-4005

Site Need Name: Characterization of Inaccessible Areas

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Internal Duct Characterization System		
Internal Duct Characterization System		
Internal Duct Characterization System		
Internal Duct Characterization System		
Small Pipe Characterization System (SPCS)		
Small Pipe Characterization System (SPCS)		
Small Pipe Characterization System (SPCS)		
Small Pipe Characterization System (SPCS)		
Pipe Explorer (TM) System		
Pipe Explorer (TM) System		
Pipe Explorer (TM) System		
Pipe Explorer (TM) System		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Associated Particle Imaging Development		

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Technology Needs

Associated Particle Imaging Development

Associated Particle Imaging Development

Associated Particle Imaging Development

Pipe Crawler Internal Piping Characterization System

Pipe Crawler Internal Piping Characterization System

Pipe Crawler Internal Piping Characterization System

Pipe Crawler Internal Piping Characterization System

Site Need Code: SR99-4006

Site Need Name: Asbestos Treatment to Allow Reuse

Focus Area Work Package ID: DD-10 **Focus Area Work Package:** Production Reactor D&D

Focus Area: DDFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
In Situ Chemical Treatment of Asbestos		
In Situ Chemical Treatment of Asbestos		
In Situ Chemical Treatment of Asbestos		
In Situ Chemical Treatment of Asbestos		
Thermal Conversion of Asbestos		
Thermal Conversion of Asbestos		
Thermal Conversion of Asbestos		
Thermal Conversion of Asbestos		
Strippable Coatings and Fixatives		
Strippable Coatings and Fixatives		

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Technology Needs

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Site Need Code: SR99-4007

Site Need Name: Characterization of Volumetrically Contaminated Surfaces

Focus Area Work Package ID: DD-01 **Focus Area Work Package:** D&D of Tritium Contaminated Facilities

Focus Area: DDFA **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Portable X-Ray, K-Edge Heavy Metal Detector		
Remote Concrete Coring		
Remote Concrete Coring		
Remote Concrete Coring		
Remote Concrete Coring		

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Technology Needs

Site Need Code: SR99-4008

Site Need Name: Dismantlement of Concrete-Encased Piping

Focus Area Work Package ID: DD-11

Focus Area Work Package: Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Oxy-Gasoline Torch		
Oxy-Gasoline Torch		
Oxy-Gasoline Torch		
Remote Control Concrete Demolition System		
Remote Control Concrete Demolition System		
Remote Control Concrete Demolition System		
Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting		
Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting		
Liquid-Nitrogen Cooled Diamond-Wire Concrete Cutting		
Track Mounted Shear/Crusher		
Track Mounted Shear/Crusher		
Track Mounted Shear/Crusher		

Related CCP Milestones

Related Waste Streams	Agree?	Change?
00522: LAC - Low Activity Bulk Waste	Y	N
02184: AA - LLW Soil, Rubble, Debris	Y	N
00528: LAE - Incinerable Low Activity Job Control Waste	Y	N
00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal	Y	N

Technology Needs

Site Need Code: SR99-4009

Site Need Name: Improved Exhaust Treatment Systems

Focus Area Work Package ID: DD-11 **Focus Area Work Package:** Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N
	00578: TAP - Drums Segregated and Repackaged for WIPP Disposal	Y	N

Site Need Code: SR99-4010

Site Need Name: Characterization Data Management

Focus Area Work Package ID: DD-10 **Focus Area Work Package:** Production Reactor D&D

Focus Area: DDFA **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Rapid Surface Sampling and Archive Record (RSSAR) System		
Rapid Surface Sampling and Archive Record (RSSAR) System		
Rapid Surface Sampling and Archive Record (RSSAR) System		
Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)		
Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)		

Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **Savannah River** Print Date: **3/9/2000**

Site Summary Level: **Savannah River Site** HQ ID: **0503**

Project **SR-FA06 / 235-F Deactivation Project**

Technology Needs

Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)

Mobile Automated Characterization System

Mobile Automated Characterization System

Mobile Automated Characterization System

Gamma Cam (TM) Radiation Imaging System

Gamma Cam (TM) Radiation Imaging System

Gamma Cam (TM) Radiation Imaging System

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

Indoor Radiation Mapping Using Laser Assisted Ranging and Data System

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

System for Tracking Remediation, Exposure, Activities and Materials (STREAM)

Site Need Code: SR99-4011

Site Need Name: Waste Characterization

Focus Area Work Package ID: DD-03

Focus Area Work Package: Canyon Disposition Initiative

Focus Area: DDFA

Agree with Technology Link: N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	**Cost Savings (in thousands of dollars)**	**Range of Estimate**
Portable X-Ray, K-Edge Heavy Metal Detector		

Project Baseline Summary Report

Data Source: **EM CDB**
Report Number: **GEN-01b**
Operations/Field Office: **Savannah River**
Print Date: **3/9/2000**
Site Summary Level: **Savannah River Site**
HQ ID: **0503**
Project **SR-FA06 / 235-F Deactivation Project**

Technology Needs

Portable X-Ray, K-Edge Heavy Metal Detector
Portable X-Ray, K-Edge Heavy Metal Detector
Waste Inspection Tomography (WIT)
Waste Inspection Tomography (WIT)
Waste Inspection Tomography (WIT)
Characterization Development
Characterization Development
Characterization Development
Associated Particle Imaging Development
Associated Particle Imaging Development
Associated Particle Imaging Development
WIPP Certifiable TRU Standard Waste Box Counter
WIPP Certifiable TRU Standard Waste Box Counter
WIPP Certifiable TRU Standard Waste Box Counter

Site Need Code: SR99-4012
Site Need Name: Stabilization of Contaminated Equipment / Components/ Surfaces
Focus Area Work Package ID: DD-10
Focus Area Work Package: Production Reactor D&D
Focus Area: DDFA
Agree with Technology Link: Y
Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Reactor Surface Contamination Stabilization		
Reactor Surface Contamination Stabilization		

Technology Needs

Reactor Surface Contamination Stabilization

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Strippable Coatings and Fixatives

Site Need Code: SR99-4013

Site Need Name: Containment / Confinement Technologies

Focus Area Work Package ID: DD-03 **Focus Area Work Package:** Canyon Disposition Initiative

Focus Area: DDFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate

Site Need Code: SR99-4015

Site Need Name: Decontamination of Small Components

Focus Area Work Package ID: DD-11 **Focus Area Work Package:** Deactivation of 321-M Fuel Fabrication Facility

Focus Area: DDFA **Agree with Technology Link:** N

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
CORPEX Nuclear Decontamination Process		
CORPEX Nuclear Decontamination Process		

Project Baseline Summary Report

Data Source: **EM CDB** Report Number: **GEN-01b**

Operations/Field Office: **Savannah River** Print Date: **3/9/2000**

Site Summary Level: **Savannah River Site** HQ ID: **0503**

Project **SR-FA06 / 235-F Deactivation Project**

Technology Needs

CORPEX Nuclear Decontamination Process

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Steam Vacuum Cleaning

Soft Media Blast Cleaning

Soft Media Blast Cleaning

Soft Media Blast Cleaning

Related CCP Milestones	Related Waste Streams	Agree?	Change?
	00583: -	Y	N
	00528: LAE - Incinerable Low Activity Job Control Waste	Y	N
	00574: TAL - TRU Waste Segregated and Repackaged for WIPP Disposal	Y	N
	00530: LAF - Bulk Metal for Survey/Decon	Y	N

Site Need Code: SR99-4016

Site Need Name: Health and Safety Technologies

Focus Area Work Package ID: DD-10 **Focus Area Work Package:** Production Reactor D&D

Focus Area: DDFA **Agree with Technology Link:** Y

Benefits (Cost, Risk Reduction, Both): Cost

Technologies	Cost Savings (in thousands of dollars)	Range of Estimate
Advanced Worker Protection System		
Advanced Worker Protection System		

Project Baseline Summary Report

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Print Date: **3/9/2000**
Site Summary Level: **Savannah River Site**
HQ ID: **0503**
Project **SR-FA06 / 235-F Deactivation Project**

Technology Needs

Advanced Worker Protection System
Personal Ice Cooling System (PICS)
Personal Ice Cooling System (PICS)
Personal Ice Cooling System (PICS)
Heat Stress Monitoring System
Heat Stress Monitoring System
Heat Stress Monitoring System
Wireless Remote Monitoring System
Wireless Remote Monitoring System
Wireless Remote Monitoring System
Heat Stress Mitigation
Heat Stress Mitigation
Heat Stress Mitigation

Technology Deployments

	Deployment Year		
Deployment Status	**Planned**	**Forecast**	**Actual Date**
Technology Name: Laser Surface Cleaning			
Potential Deployment	2004		
Technology Name: Small Pipe Characterization System (SPCS)			
Potential Deployment	2004		

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Project **SR-FA06 / 235-F Deactivation Project**

Technology Deployments

		Deployment Year		
Deployment Status		**Planned**	**Forecast**	**Actual Date**
Technology Name:	In Situ Chemical Treatment of Asbestos			
Potential Deployment		2004		
Technology Name:	Airborne Laser Induced Fluorescence Imaging			
Potential Deployment		2004		
Technology Name:	Three Dimensional, Integrated Characterization and Archiving System (3D-ICAS)			
Potential Deployment		2004		
Technology Name:	Thermal Conversion of Asbestos			
Potential Deployment		2004		
Technology Name:	Removal of Contaminants from Equipment and Debris, and Waste Minimization Using TECHXTRACT			
Potential Deployment		2004		
Technology Name:	Portable X-Ray Fluorescence Spectrometer			
Potential Deployment		2004		
Technology Name:	Mobile Automated Characterization System			
Potential Deployment		2004		
Technology Name:	Pipe Crawler Internal Piping Characterization System			
Potential Deployment		2004		
Technology Name:	Surface Contamination Monitor and Survey Information Management System (SCM/SIMS)			
Potential Deployment		2004		

Project Baseline Summary Report

Data Source: **EM CDB**

Operations/Field Office: **Savannah River**

Site Summary Level: **Savannah River Site**

Project **SR-FA06 / 235-F Deactivation Project**

Report Number: **GEN-01b**

Print Date: **3/9/2000**

HQ ID: **0503**

Technology Deployments

	Deployment Year		
Deployment Status	**Planned**	**Forecast**	**Actual Date**
Technology Name: Pegasus Coating Removal			
Potential Deployment	2004		
Technology Name: Indoor Radiation Mapping Using Laser Assisted Ranging and Data System			
Potential Deployment	2004		
Technology Name: Ground Based Laser Induced Fluorescence Imaging			
Potential Deployment	2004		